

DETAILED ACTION

Allowable Subject Matter

1. Claims 38, and 40-41 are allowed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 7, 14, 22- 24, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Autry(US Patent 6,990,577).

As to claim 1, Autry discloses a method of updating a non-essential region(configuration data region; see column 2, line 26) stored in a non-volatile memory device(FLASH memory 97; see Fig. 1) in a computer system(system 10, see Fig. 1), the method comprising building an image file(basic input/output system(BIOS) image; see column 2, lines 12-13), the image file comprising an essential region(preserved data from the configuration data region; see column 2, lines 40-41) for storing program code required for booting the computer system and the non-essential region for storing optional program code for the computer system. Autry also discloses the method

comprising copying the image file to the non-volatile memory device in the computer system(see column 2, lines 11-12), and following copying the image file to the non-volatile memory device in the computer system, updating only the non-essential region stored in the non-volatile memory device to update the optional program code for the computer system(see column 2, lines 29-35) and not updating the essential region stored in the non-volatile memory device(see column 2, lines 39-43).

As to claim 7, Autry discloses the method wherein the program code in the essential region comprises a power-on self test (POST) routine(see column 2, lines 44-56).

As to claim 14, Autry discloses a computer system(system 10, see Fig. 1) for updating non-essential data(configuration data region; see column 2, line 26) in a non-volatile memory device(FLASH memory 97; see Fig. 1), comprising the non-volatile memory device for storing an image file(basic input/output system(BIOS) image; see column 2, lines 12-13), the image file comprising an essential region(preserved data from the configuration data region; see column 2, lines 40-41) for storing program code required for booting the computer system and the non-essential region for storing optional program code for the computer system. Autry also discloses the computer system comprising a memory(system memory 88, see Fig. 1) for storing a program containing code for updating the image file stored in the non-volatile memory device, and a processor(processor 82, see Fig. 1), functionally coupled to the memory and associated with the non-volatile memory device, wherein the processor is responsive to computer-executable instructions contained in the program and operative to copy the

image file to the non-volatile memory device, and update only the non-essential region in the non-volatile memory device to update the non-essential data(see column 2, lines 29-35) and not update the essential region in the non-volatile memory device(see column 2, lines 39-43).

As to claim 22, Autry discloses the computer system wherein the essential region in the image file comprises critical program code(see column 2, lines 12-16).

As to claim 23, Autry discloses the computer system wherein the critical program code comprises a power-on self test (POST) routine(see column 2, lines 44-56).

As to claim 24, Autry discloses a computer-readable medium(system 10, see Fig. 1) having computer-executable instructions for performing steps comprising building an image file(basic input/output system(BIOS) image; see column 2, lines 12-13), the image file comprising an essential region(preserved data from the configuration data region; see column 2, lines 40-41) for storing program code required for booting the computer system and a non-essential region(configuration data region; see column 2, line 26) for storing optional program code for the computer system. Autry also discloses the computer-readable medium comprising instructions for copying the essential region and the non-essential region to a non-volatile memory device(FLASH memory 97; see Fig. 1), and following copying the essential region and the non-essential region to the non-volatile memory device, updating only the non-essential region in the non-volatile memory device(see column 2, lines 29-35) and not updating the essential region in the non-volatile memory device(see column 2, lines 39-43).

As to claim 30, Autry discloses the computer-readable medium wherein the program code in the essential region comprises a power-on self test (POST) routine(see column 2, lines 44-56).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 2-6, 15, 16, 24, 25, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Autry(US Patent 6,990,577) in view of Forsman et al.(US Patent 6,665,813).

As to claim 2, Autry discloses the limitations as cited in claim 1; however, Autry fails to disclose the method wherein the non-essential region in the image file comprises one or more non-essential blocks. Forsman teaches a method where a non-essential

region(Copy A 304 and Copy B 306; see Fig. 3) comprises one or more non-essential block(Copy A 304 or Copy B 306, see Fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Forsman's multiple non-essential blocks with Autry's non-essential region in order to have "back-up" blocks within the non-essential region. The motivation to do so would be to have another block to depend on in case one is corrupted(see Forsman column 5, lines 46-56).

As to claim 3, Forsman teaches the method further comprising reserving at least one of a plurality of sectors(see Fig. 3) in the non-volatile memory device for storing exclusively the at least one non-essential blocks(see column 4, line 66-column 5, line 2; see also Fig. 3).

As to claim 4, Forsman teaches the method wherein updating the non-essential region in the non-volatile memory device comprises mapping the one or more non-essential blocks to the at least one reserved sector in the non-volatile memory device(see column 4, line 66-column 5, line 14).

As to claim 5, Forsman teaches the method wherein updating the non-essential region in the non-volatile memory device comprises mapping the one or more non-essential blocks to a portion of the at least one reserved sector in the non-volatile memory device(see column 4, line 66-column 5, line 14; see also Fig. 3).

As to claim 6, Forsman teaches the method wherein the portion of the at least one reserved sector in the non-volatile memory device is a paragraph multiple(see Fig. 3).

As to claim 15, Autry discloses the limitations as cited in claim 14; however, Autry fails to disclose the computer system wherein the non-essential region in the image file comprises at least one or more non-essential blocks. Forsman teaches a computer system(data processing system 100, see Fig. 1) where a non-essential region(Copy A 304 and Copy B 306; see Fig. 3) comprises one or more non-essential block(Copy A 304 or Copy B 306, see Fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Forsman's multiple non-essential blocks with Autry's non-essential region in order to have "back-up" blocks within the non-essential region. The motivation to do so would be to have another block to depend on in case one is corrupted(see Forsman column 5, lines 46-56).

As to claim 16, Forsman teaches the computer system wherein the non-volatile memory device comprises a plurality of sectors(see Fig. 3) for storing the at least one non-essential block(see column 4, line 66-column 5, line 2; see also Fig. 3).

As to claim 25, Autry discloses the limitations as cited in claim 24; however, Autry fails to disclose the computer-readable medium wherein the non-essential region in the image file comprises at least one or more non-essential blocks. Forsman teaches a computer-readable medium(data processing system 100, see Fig. 1) where a non-essential region(Copy A 304 and Copy B 306; see Fig. 3) comprises one or more non-essential block(Copy A 304 or Copy B 306, see Fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Forsman's multiple non-essential blocks with Autry's non-essential region in order to have "back-up" blocks within the non-essential region. The motivation to do so would be to have

another block to depend on in case one is corrupted(see Forsman column 5, lines 46-56).

As to claim 27, Forsman teaches the computer-readable medium wherein updating only the non-essential region in the non-volatile memory device comprises mapping the at least one non- essential block to the at least one reserved sector in the non-volatile memory device(see column 4, line 66-column 5, line 14).

As to claim 28, Forsman teaches the computer-readable medium wherein updating only the non-essential region in the non-volatile memory device comprises mapping each non-essential block to a portion of the at least one reserved sector in the non-volatile memory device(see column 4, line 66-column 5, line 14; see also Fig. 3).

As to claim 29, Forsman teaches the computer-readable medium wherein the portion of the at least one reserved sector in the non-volatile memory device is a paragraph multiple(see Fig. 3).

4. Claims 8-13, 17-21, 26, and 31-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Autry(US Patent 6,990,577) in view of Forsman et al.(US Patent 6,665,813), and further in view of Singer et al.(US Patent 7,017,040).

As to claim 8, Autry and Forsman teach and disclose the limitations of claim 2 and comprising at least one module(see Forsman, Fig. 3); however, Autry and Forsman fail to teach or disclose the method wherein the one or more non-essential blocks comprise a header. Singer teaches the one or more non-essential blocks comprise a

header(volume header 58, see Fig. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Singer's non-essential block with a header to Autry and Forsman's non-essential block in order to contain a header. The motivation to do so would be to have been to have the ability to have the header point to the module which contains a list of the locations of everything contained within the BIOS update file(see Singer column 2, lines 40-42).

As to claim 9, Singer teaches the method wherein the header is located at the beginning of the one of the one or more non-essential blocks(see Fig. 2).

As to claim 10, Singer teaches the method wherein the header comprises a pointer to a first module in the one of the one or more non-essential blocks(see column 2, lines 40-42 and Fig. 2).

As to claim 11, Singer teaches the method wherein the at least one module comprises a module header(volume header 58, see Fig. 2) and module data(data 61, see Fig. 2).

As to claim 12, Singer teaches the method wherein the module header comprises a pointer to a next module in the at least one non-essential block(see column 2, lines 40-42 and Fig. 2).

As to claim 13, Singer teaches the method wherein the module data comprises at least one of graphics data, a language module, and diagnostic tools(see column 2, lines 45-47).

As to claim 17, Autry and Forsman teach and disclose the limitations of claim 15 and comprising at least one module(see Forsman, Fig. 3); however, Autry and Forsman

fail to teach or disclose the computer system wherein the at least one non-essential block comprising a header. Singer teaches the at least one non-essential block comprising a header(volume header 58, see Fig. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Singer's non-essential block with a header to Autry and Forsman's non-essential block in order to contain a header. The motivation to do so would be to have been to have the ability to have the header point to the module which contains a list of the locations of everything contained within the BIOS update file(see Singer column 2, lines 40-42).

As to claim 18, Singer teaches the computer system wherein the header is located at the beginning of the non-essential block(see Fig. 2).

As to claim 19, Singer teaches the computer system wherein the at least one module comprises a module header(volume header 58, see Fig. 2) and module data(data 61, see Fig. 2).

As to claim 20, Singer teaches the computer system wherein the module data comprises program code(see column 2, lines 40-42 and Fig. 2).

As to claim 21, Singer teaches the computer system wherein the module data comprises at least one of graphics data, a language module, and diagnostic tools(see column 2, lines 45-47).

As to claim 26, Singer discloses the computer-readable medium further comprising reserving at least one of a plurality of sectors(see Fig. 3) in the non-volatile memory device for storing the at least non-essential block(see column 4, line 66-column 5, line 2; see also Fig. 3).

As to claim 31, Autry and Forsman teach and disclose the limitations of claim 25 and comprising at least one module(see Forsman, Fig. 3); however, Autry and Forsman fail to teach or disclose the computer-readable medium wherein the at least one non-essential block comprises a header. Singer teaches the at least one non-essential blocks comprises a header(volume header 58, see Fig. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Singer's non-essential block with a header to Autry and Forsman's non-essential block in order to contain a header. The motivation to do so would be to have been to have the ability to have the header point to the module which contains a list of the locations of everything contained within the BIOS update file(see Singer column 2, lines 40-42).

As to claim 32, Singer teaches the computer-readable medium wherein the header is located at the beginning of the at least one non-essential block(see Fig. 2).

As to claim 33, Singer teaches the computer-readable medium wherein the header comprises a pointer to a first module in the at least one non-essential block(see column 2, lines 40-42 and Fig. 2).

As to claim 34, Singer teaches the computer-readable medium wherein the at least one module comprises a module header(volume header 58, see Fig. 2) and module data(data 61, see Fig. 2).

As to claim 35, Singer teaches the computer-readable medium wherein the module header comprises a pointer to a next module in the at least one non-essential block(see column 2, lines 40-42 and Fig. 2).

As to claim 36, Singer teaches the computer-readable medium wherein the module data comprises program code(see Fig. 2).

As to claim 37, Singer teaches the computer-readable medium wherein the module data comprises at least one of graphics data, a language module, and diagnostic tools(see column 2, lines 45-47).

Response to Arguments

5. Applicant's arguments, see Remarks, filed 11/20/2007, with respect to the rejection(s) of claim(s) 1, 7, 14, 22- 24, and 30 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made under 35 U.S.C. 102(e) instead of under 35 U.S.C. 102(b).

Applicant argues Autry's configuration data region does not disclose the applicant's recited "non-essential region for storing optional program code for the computer system". Examiner disagrees as Autry discloses the basic input/output system(BIOS) image with a configuration data region which is preserved. This preserved region is obviously essential to booting the computer system. On the other hand, the configuration data region that is not preserved is not needed to boot the computer system. Thus, this region is non-essential to booting the computer system(see column 2, lines 25-29 and lines 39-43).

Applicant also argues, mainly due to belief of a lack of a non-essential region, that Autry does not disclose "updating only the non-essential region". Examiner disagrees as Autry discloses replacing the existing BIOS image with a replacement BIOS image and overwriting the existing configuration data region in order to upgrade the BIOS(see column 2, lines 29-32). Autry further discloses the preserved configuration data region(essential region) being preserved to support that only the non-essential region is updated(see column 2, lines 39-43).

Applicant also argues that Forsman's Copy A 304 and Copy B 306 are essential rather than non-essential, in the sense that both copies provide a form of backup for each other in case one of these copies becomes corrupted. Examiner disagrees as the copy that is "backup" to the other is non-essential. It only becomes essential if the other copy is corrupted.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Brown whose telephone number is (571)272-5932. The examiner can normally be reached Monday-Thursday from 7:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571)272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2116

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael J. Brown
Art Unit 2116

/Thuan N. Du/

Primary Examiner, Art Unit 2116